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ABSTRACT

The purpose of this study was to investigate whether sport preference is a random phenomenon or a phenomenon related to specific factors in the background and environment of the participant. In addition, the study explored the feasibility of forming a framework for the systematic analysis of this phenomenon by interrelating findings from independent investigators. A questionnaire was administered to 411 male and female participants in a voluntary sports program at the University of New Mexico in the spring of 1972. The data were treated by means of cannonical correlation, a multivariate procedure which handles a large array of variables in sets rather than individually. It was concluded that preference for specific sports is contingent upon a number of background and environmental factors being present and possibly interacting. Furthermore, this study revealed that by showing how a number of variables interrelate in a manner which permits the linking of these results at a higher theoretical level, a framework can be generated which may aid the systematic analysis of this phenomenon at both practical and theoretical levels. (Author/JA)

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CANONICAL RELATIONSHIPS AMONG PSYCHOSOCIAL FACTORS AND SPORT PREFERENCE

One domain in physical education which appears to be lacking both in theory and research is that of sport preference. More specifically, works of theoretical significance which attempt to describe, analyze and predict which factors appear to influence or be associated with sport preference are few indeed. With the exception of some relatively recent works by investigators in physical education and other fields (Kenyon, 1968; Nisbett, 1968; Roberts and Sutton-Smith, 1962; Riddle, 1968; Sutton-Smith, Roberts and Kozelka, 1963), little has been added to the building of a theoretical framework with which to embark on a systematic analysis of this phenomenon. It was the purpose of this investigation, therefore, to determine whether sport preference is a haphazard or random phenomenon and to identify some key variables whose explanatory and predictive power could generate the rudiments of a conceptual framework which could stimulate future theoretically-based research.

Review of the Literature

Research suggests that a multiplicity of factors may contribute to a S's preference for a certain sport. Roberts and Sutton-Smith (1962) and

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Sutton-Smith, Roberts, and Kozelka (1963) suggest that various forms of child training are associated with specific game forms, with sports being one such form.

Nisbett (1968), among other investigators (Helmreich and Collins, 1967; Torrance, 1954), demonstrated a relationship between birth order, tolerance for pain and participation in high and low risk sports.

Kenyon (1968) hypothesized that a person's attitude or motive for participating may account for some of the variation in sport preference. By generating a model which characterizes a person's motive for participating in sport in terms of "perceived instrumentality," he provided the framework which led Alderman (1969) and Dotson and Stanley (1972) to investigate participants' motives in various activities.

Various investigators have also reported that social class appears to be associated with preference for certain sports. Luschen (1969), in investigating the social class characteristics of young participants in Germany, generated a taxonomy in which tennis, field hockey and skiing were found to be associated primarily with the higher social class. McIntyre (1959) found that participants in body contact and combative sports such as football and wrestling were more likely to have been brought up in lower class environments than participants in non-combative sports. Loy (1969), in a study with 1,021 former Life Pass holders, found that in line with McIntyre's findings, wrestling, boxing, football and baseball, together with soccer and field athletics were found to be primarily lower class sports. Crew, tennis, golf, fencing and swimming were among the "upper class" sports.

While sport involvement by males is a much encouraged phenomenon in our society, the female position appears to be somewhat ambiguous. This problem has been alluded to by various investigators (Hart, 1972a; Blythe, 1969; Higdon and Higdon, 1970; Ogilvie, 1967). Metheny (1965) stated that some forms of competition, especially at the international level, are not included for women. In a 1963 study, Hart (1972b) raised the question, "When young women do enjoy sport, what activities are really open to them?" In her conclusions, Hart noted that activities selected by women are often associated with "aesthetic considerations, social implications and fashion for women."

While the preceding review of some of the literature identified various factors which appear to be associated with sport preference, a larger question which needs to be answered is: Which combination of these factors is associated with preference for specific sports, and can generalizations be generated which may be employed to explain and predict why people select the sports they do?

Definition of Variables

The social experience. Physical activity perceived by the participant as providing a medium for social intercourse, i.e., to meet new people and perpetuate existing relationships.

Vertigo. Physical activity perceived as providing, at some risk to the participant, an element of thrill through the medium of speed, acceleration, and sudden change of direction, with the participant usually remaining in control.

The aesthetic experience. Physical activity and movement perceived as possessing beauty or certain artistic qualities.

The ascetic experience. Physical activity perceived by the participant as involving long and strenuous training and competition of the kind found in intercollegiate and interscholastic athletics.

Procedures

Ss for this investigation were male and female graduate and undergraduate students enrolled in non-required physical activity classes at the University of New Mexico. In total, 450 students answered a questionnaire, of whom only 411 were included in the final analysis (39 were excluded for such reason as failing to complete the questionnaire, giving unclassifiable responses etc.). Of these, 62% were males and 38% were females.

The questionnaire consisted of twenty-eight predictor variables, tapping such areas as body esteem, sex, need for success in sport, social class, ethnic background, parental child training and sport competency, among others. In addition, the respondents were asked to indicate their degree of preference for seven selected sports (football, volleyball, motorcycle racing, skiing, sky diving, pool and soccer).

The data were analyzed using canonical correlation. This method was employed because, unlike univariate procedures, this type of multivariate correlation manages several independent and dependent variables simultaneously. An additional feature of this procedure is that interaction effects within and between the two sets of data are also provided.

Each canonical correlation was tested for significance using a technique developed by Pillai (1967).

Results

Nine canonical coefficients were generated, of which only the first four could be meaningfully interpreted. The first two canonical coefficients

of .73 and .47 were significant beyond the .01 level; the third canonical of .38 was significant at about the .06 level; and the fourth canonical was significant at approximately the .10 level of confidence.

The first canonical relationship of .73 indicated (Table 1) that being male, with competency in body contact sports, stressing the ascetic experience and the pursuit of vertigo as reasons for participating were associated with primarily football, and to a lesser degree with soccer. Volleyball was least preferred.

The second canonical relationship of .47 indicated (Table 2) that being of a higher social class, stressing the pursuit of vertigo and indicating competency in sports without strategy and with body contact were associated with primarily sky diving, soccer, and skiing. Pool was least preferred.

The third canonical correlation of .38 indicated (Table 3) that being of a higher social class, having strict parents, stressing the ascetic and aesthetic experiences in sport and indicating competency in primarily sports without strategy were associated with football and skiing. Sky diving was least preferred.

The final canonical correlation of .36 indicated (Table 4) that being female, stressing the pursuit of vertigo, being of a lower social class, having a higher need for success in sport and being laterborn were associated with motorcycle racing. Soccer was least preferred.

Discussion

It will be noted that four variables contributed quite substantially to the canonical correlation from the psychosocial domain. These were: sex, social class, motives for participating in sport and competency in contact or

TABLE 1

RELATIVE CONTRIBUTION OF EACH VARIABLE IN THE FIRST CANONICAL CORRELATION BETWEEN THE PSYCHOSOCIAL AND SPORT DOMAINS

Psychosocial Domain	Sport Domain
.59 Male	.67 Football
.25 Competency in body contact sports	-.35 Volleyball
.19 Ascetic experience	.23 Soccer
Canonical Correlation = .73 (p = .01)	

TABLE 2

RELATIVE CONTRIBUTION OF EACH VARIABLE IN THE SECOND CANONICAL CORRELATION BETWEEN THE PSYCHOSOCIAL AND SPORT DOMAINS

Psychosocial Domain	Sport Domain
.58 Competency in sports without strategy	.51 Sky diving
.54 Higher social class	.35 Soccer
.45 Competency in body contact sports	-.34 Pool
.40 Pursuit of vertigo	.32 Skiing
Canonical correlation = .47 (p = .01)	

TABLE 3

RELATIVE CONTRIBUTION OF EACH VARIABLE IN THE THIRD CANONICAL CORRELATION BETWEEN THE PSYCHOSOCIAL AND SPORT DOMAINS

Psychosocial Domain	Sport Domain
.48 Competency in sports without strategy	.74 Football
.40 Ascetic experience	-.56 Sky diving
.36 Aesthetic experience	.41 Skiing
.34 Higher social class	
.27 Strict parents	
Canonical Correlation = .38 (p = .06)	

TABLE 4

RELATIVE CONTRIBUTION OF EACH VARIABLE IN THE FOURTH CANONICAL CORRELATION BETWEEN THE PSYCHOSOCIAL AND SPORT DOMAINS

Psychosocial Domain	Sport Domain
.61 Pursuit of vertigo	.72 Motorcycle racing
-.52 Female	-.53 Soccer
-.37 Lower social class	
.35 Higher need for success in sport	
-.32 Laterborn	

Canonical Correlation = .36 (p = approximately .10)

non-body contact sports. Associated with these were primarily football, sky diving, skiing and motorcycle racing.

Firstly, what is the psychological or sociological significance of being male or female in sport? According to the works of Roberts and Sutton-Smith (1962) and Sutton-Smith, Roberts and Kozelka (1963), games in which the physical component is of primary concern may be acceptable expressive models for males as they are primarily associated with achievement and aggressiveness. These reflect roles considered acceptable in the socialization of the male in our society. This implies that, if parental training were the sole determining factor influencing sport participation, women should be grossly underrepresented in sports. This did not prove to be the case, although the results lend tentative support to the proposicion advanced by several other investigators (Hart, 1972a; Melheny, 1972) that certain sports in which the male ethic of toughness, achievement and aggressiveness is almost a prerequisite, females tend to be excluded. In this study, it was found that of the seven sports included in the investgation, volleyball and motorcycle racing were selected by females. While volleyball is a societally acceptable sport for women, the latter activity is probably marginal. This latter sport was preferred by women of lower social class origins, however.

At this stage it is appropriate to discuss what social class means in terms of sport preference. In this study, social class was found to be clearly associated with specific sports. The results are essentially in accord with those of other investigators (Loy, 1969; Luschen, 1969; McIntyre, 1959). One possible explanation as to why social class is

associated with sport preference may have to do with the fact that all sports, sociologically speaking, are micro-social systems. This implies that they have a social structure (status-role relationships, patterned interaction) and a culture (values, norms, sanctions). Various investigators have either alluded to or described this phenomenon (Boroff, 1964; Elias and Dunning, 1966; Weinberg and Arond, 1952). This being the case, it is suggested by this investigator that the social structure and culture of various sports is probably a reflection of the social class origins of its participants. That is, persons of similar occupational, educational, social or ethnic characteristics choosing to associate in sports contexts inbue the sport of their choice with their shared system of values and attitudes. The question, however, that must be answered in order to lend support to this contention is: What is it about specific sports which appeals to various social classes? Economic factors obviously play an important role here but fail to explain the total picture. Luschen (1969) found that in Germany newer sports (new to the culture that is) tended to have a higher social status there than in their country of origin. Thus, it may be argued that length of exposure to the culture may also be an influential factor, with the higher social classes tending to adopt "imported sports" more readily than other persons lower in the social strata. A third variable which cannot be ignored is the nature of the sport. If as it has been suggested by Loy (1969) and McIntyre (1959) combative or body contact sports tend to be associated with lower class origins, it may be argued that a class value system may be in operation here. This notion is based on tenuous ground, but it is offered here as a possible avenue for further study. Clinard and Fannin (1965), in investigating the conception of self as male

among middle and lower class delinquent boys, found that lower class boys perceived themselves as being tough, powerful and fearless. They also tended to commit more violent crimes. Middle class delinquents saw themselves as being more clever and smart and tended to commit crimes which involved trickery rather than violence. If it can be argued that the lower class boys displayed what one might label a "toughness ethic," an orientation which is prevalent according to various investigators (Jesness, 1966; Miller, 1958) in lower class sub-cultures, what better way is there for lower class non-delinquent boys to display this ethic but in such societally approved ways as body contact or combative sports? In the middle and higher social classes, the lesser emphasis placed on this orientation can be expected to lead to a more diffuse pattern of sport preference.

Finally, Kenyon's conceptualization of motives for participating in sport also proved to be a meaningful predictor. High contributions were made by the pursuit of vertigo (Table 2), which linked up with sky diving and motorcycle racing (Table 4), and asceticism (Table 3), which linked up with football. While the results are somewhat difficult to interpret in the light of previous findings, some explanations ought to be forthcoming. According to Alderman (1970), for example, the ascetic experience was least stressed by champion athletes participating in the 1967 Pan-American Games. Yet, in this sample this variable was substantially stressed. Could this possibly imply some sort of interaction between level of ability and motives for participating? If this is so, it may be hypothesized that an inverse relationship exists between athletic ability and asceticism.

Why this should be so is not clear at this stage, but one avenue for futher study should include, I feel, an analysis and comparison of

prevailing value orientations between high level competitors and college and intramural level athletes. It could be that, while stressing asceticism is a prerequisite to getting to the top, once there, a type of socialization probably occurs emphasizing a broader type of experience which might incorporate such values as the social experience among athletes from different countries, the aesthetic emphasis which often accompanies excellence of performance in one's sport, and so on.

To briefly summarize the scope and findings of this study, it was found that a variety of interactions among several predictor and dependent variables yielded differential results in sport preference. From this procedure, four major contributing variables were identified in the psychosocial domain which appeared to determine or be associated with preference for certain types of sports. These were: sex, social class, competency in contact or non-body contact sports, and motives for participating in sport. A rationale linking these variables at a theoretical level was suggested.

Conclusions

On the basis of results obtained in this investigation and guided by theoretical and empirical works by other investigators, it was concluded that:

(i) Sport preference is not a haphazard or random phenomenon.

(ii) Sport preference is associated with specific factors in the background and environment of the participant.

(iii) Background and environmental factors interact to produce differntial results in sport preference.

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